AMENDMENTS TO THE CLAIMS

Claims 1 - 43 (Cancelled).

44. (Previously presented) A method of measuring a viscosity and a density of a fluid flowing through a pipe, said method comprising the steps of:

using an electromechanical excitation arrangement for driving a flow tube being inserted into the pipe and conducting said fluid;

feeding said excitation arrangement by an oscillating excitation current and driving said flow tube to vibrate in a bending mode at least partially, said bending mode vibrations causing lateral deflections of said flow tube and said bending mode vibrations producing viscous friction within said fluid;

sensing oscillations of said flow tube by using a sensor arrangement being responsive to lateral oscillations of the flow tube and generating at least one sensor signal being representative of lateral oscillations of the flow tube;

using said at least one sensor signal and said excitation current to determine a viscosit value representative of said viscosit to be measured and

using said at least one sensor signal to determine a density value representative of said density to be measured;

wherein the step of determining the viscosity value further comprises a step of using said density value for determining said viscosity to be measured; and

wherein the step of determining the viscosity value comprises the step of deriving from the density value and the excitation frequency value a correction value depending on the density of the fluid and the excitation frequency.

45. (Previously Presented) The method as claimed in claim 44, wherein the step of determining the viscosity value comprises the step of correcting the determined damping of deflections of the flow tube by using the correction value.

Claims 46 - 48 (Cancelled).

49. (Previously presented) A method of measuring a viscosity and a density of a fluid flowing through a pipe said method comprising the steps of:

using an electromechanical excitation arrangement for driving a flow tube being inserted into the pipe and conducting said fluid;

feeding said excitation arrangement by an oscillating excitation current and driving said flow tube to vibrate in a bending mode at least partially, said bending mode vibrations causing lateral deflections of said flow tube and said bending mode vibrations producing viscous friction within said fluid;

sensing oscillations of said flow tube by using a sensor arrangement being responsive to lateral oscillations of the flow tube and generating at least one sensor signal being representative of lateral oscillations of the flow tube;

using said at least one sensor signal and said excitation current to determine a viscosity value representative of said viscosity to be measured, and

using said at least one sensor signal to determine a density value representative of said density to be measured;

wherein the excitation current has an excitation frequency corresponding to a mechanical resonance frequency of the flow tube;

wherein the step of determining the viscosity value comprises the step of generating an excitation frequency value representative of said excitation frequency; and

wherein the step of determining the viscosity value comprises the step of deriving from the density value and the excitation frequency value a correction value depending on the density of the fluid and the excitation frequency.

50. (Previously Presented) The method as claimed in claim 49, wherein the step of determining the viscosity value comprises the steps of:

determining from the at least one sensor signal and from the excitation current a damping of deflections of the flow tube, and

correcting the determined damping of deflections of the flow tube by using the correction value.